

10/564959

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DICTIONARY FILE UPDATES: 4 SEP 2008 HIGHEST RN 1046534-52-4

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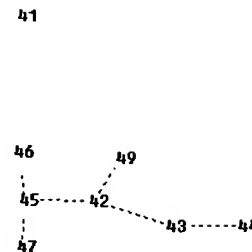
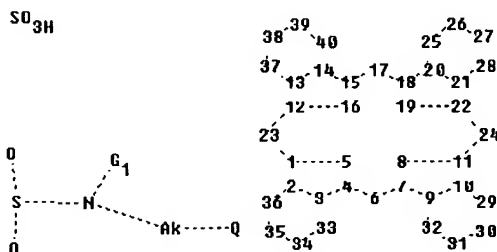
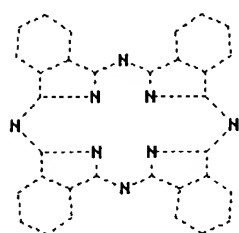
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chain nodes :

41 42 43 45 46 47 49

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

ring/chain nodes :

44

chain bonds :

42-45 42-43 42-49 43-44 45-46 45-47

ring bonds :

1-2 1-5 1-23 2-3 2-36 3-4 3-33 4-5 4-6 6-7 7-8 7-9 8-11 9-10 9-32

10-11 10-29 11-24 12-13 12-16 12-23 13-14 13-37 14-15 14-40 15-16 15-17

17-18 18-19 18-20

19-22 20-21 20-25 21-22 21-28 22-24 25-26 26-27 27-28 29-30 30-31 31-32

33-34 34-35

35-36 37-38 38-39 39-40

exact/norm bonds :

1-2 1-5 1-23 2-3 2-36 3-4 3-33 4-5 4-6 6-7 7-8 7-9 8-11 9-10 9-32

10-11 10-29 11-24 12-13 12-16 12-23 13-14 13-37 14-15 14-40 15-16 15-17

17-18 18-19 18-20

19-22 20-21 20-25 21-22 21-28 22-24 25-26 26-27 27-28 29-30 30-31 31-32

33-34 34-35

35-36 37-38 38-39 39-40 42-45 42-43 42-49 43-44 45-46 45-47

G1:H,Ak

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom

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20:Atom 21:Atom  
22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom  
31:Atom 32:Atom  
33:Atom 34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:CLASS  
42:CLASS 43:CLASS  
44:CLASS 45:CLASS 46:CLASS 47:CLASS 49:CLASS

=> file zcaplus

FILE 'ZCAPLUS' ENTERED AT 13:22:12 ON 05 SEP 2008

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FILE COVERS 1907 - 5 Sep 2008 VOL 149 ISS 11

FILE LAST UPDATED: 4 Sep 2008 (20080904/ED)

ZCaplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

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'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> d stat que L99

L4 STR

Structure diagram not available for display

Structure attributes must be viewed using STN Express query preparation.

L23 1476 SEA FILE=REGISTRY SSS FUL L4

L97 2913 SEA FILE=ZCAPLUS ABB=ON PLU=ON PATEL P?/AU

L99 1 SEA FILE=ZCAPLUS ABB=ON PLU=ON L23 AND L97

=> d stat que L102

L7 18 SEA FILE=REGISTRY ABB=ON PLU=ON (10025-87-3/BI OR 110-91-8/BI  
OR 11098-84-3/BI OR 111-48-8/BI OR 121-47-1/BI OR 147-14-8/BI  
OR 4439-20-7/BI OR 53507-01-0/BI OR 57-13-6/BI OR 574-93-6/BI  
OR 616-45-5/BI OR 6674-22-2/BI OR 7447-39-4/BI OR 7647-14-5/BI  
OR 7664-41-7/BI OR 7790-94-5/BI OR 870-24-6/BI OR 9014-85-1/BI)

10/564959

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L10 1 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND L9  
L97 2913 SEA FILE=ZCAPLUS ABB=ON PLU=ON PATEL P?/AU  
L102 16 SEA FILE=ZCAPLUS ABB=ON PLU=ON L10 AND L97

=> s L99 or L102  
L106 17 L99 OR L102

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MOST RECENT UPDATE: 200856 <200856/DW>  
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reclassified documents, but they can be identified by  
20060101/UPIC and 20061231/UPIC, 20070601/UPIC, 20071001/UPIC,  
20071130/UPIC, 20080401/UPIC and 20080701/UPIC.  
ECLA reclassifications to June and US national classifications to  
the end of April 2008 have also been loaded. Update dates  
20080401 and 20080701/UPEC and /UPNC have been assigned to these. <<<

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>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

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L104 18272 SEA FILE=WPIX ABB=ON PLU=ON PHTHALOCYAN?/BIX  
L105 26 SEA FILE=WPIX ABB=ON PLU=ON L103 AND L104

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PROCESSING COMPLETED FOR L106  
PROCESSING COMPLETED FOR L105  
L107 27 DUP REM L106 L105 (16 DUPLICATES REMOVED)

10/564959

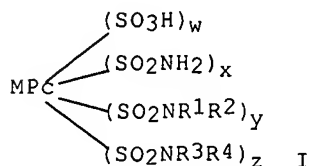
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ANSWERS '18-27' FROM FILE WPIX

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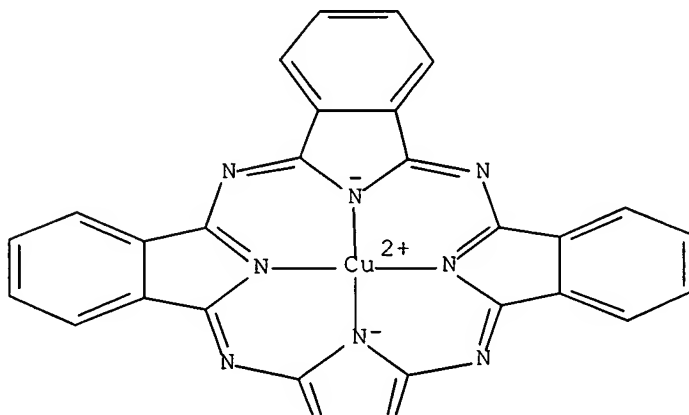
L107 ANSWER 1 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 2006:1147667 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 145:473097  
 TITLE: Phthalocyanine derivatives and their applications for ink-jet printing  
 INVENTOR(S): Patel, Prakash  
 PATENT ASSIGNEE(S): Fujifilm Imaging Colorants Limited, UK  
 SOURCE: PCT Int. Appl., 25pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006114569	A2	20061102	WO 2006-GB1330	20060411
WO 2006114569	A3	20061221		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM EP 1877494 A2 20080116 EP 2006-726730 20060411 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR IN 2007DN07881 A 20071123 IN 2007-DN7881 20071012 MX 200712833 A 20071120 MX 2007-12833 20071015 CN 101163751 A 20080416 CN 2006-80013435 20071022 KR 2008004627 A 20080109 KR 2007-727246 20071122 PRIORITY APPLN. INFO.: GB 2005-8234 A 20050423 GB 2005-8238 A 20050423 WO 2006-GB1330 W 20060411 OTHER SOURCE(S): MARPAT 145:473097 GI				

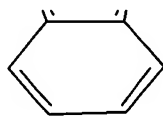


- AB A mixture of compds. I and salts thereof, wherein M = 2H, Si, a metal, an oxymetal group, a hydroxymetal group or a halometal group, Pc = phthalocyanine nucleus, R1 = H or Cl-4 alkyl, R2 = alkyl or heterocyclyl, R3 = H or Cl-4 alkyl, R4 = hydrocarbyl, w, x, y, z = 0.1 to 3.7, and y ≠ z, can be used in ink-jet printing when mixed with liquid medium. Ink-jet printing processes, printed material, and ink-jet printer cartridges using the above compns. are also provided. Thus, potassium 4-sulfophthalic acid were cyclized in the presence of CuCl<sub>2</sub>, ammonium molybdate, 1,8-diazabicyclo[5.4.0]undec-7-ene, chlorinated with POCl<sub>3</sub>, and reacted with taurine, homo-aurine, and concentrated ammonia to receive a phthalocyanine derivative
- CC 42-6 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 41
- IT 147-14-8DP, Copper phthalocyanine, sulfonamide/sulfonate derivs.  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phthalocyanine derivs. for ink-jet printing and cartridges)
- IT 147-14-8DP, Copper phthalocyanine, sulfonamide/sulfonate derivs.  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phthalocyanine derivs. for ink-jet printing and cartridges)
- RN 147-14-8 ZCAPLUS
- CN Copper, [29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,.ka ppa.N32]-, (SP-4-1)- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L107 ANSWER 2 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 2  
 ACCESSION NUMBER: 2006:471790 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 144:490400  
 TITLE: Phthalocyanine compounds and their use in ink-jet printing  
 INVENTOR(S): Mayall, John; Patel, Prakash  
 PATENT ASSIGNEE(S): Fujifilm Imaging Colorants Limited, UK  
 SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006051258	A1	20060518	WO 2005-GB4054	20051021
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EP 1812517	A1	20070801	EP 2005-794756	20051021
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR			
JP 2008519880	T	20080612	JP 2007-540702	20051021
US 20080110369	A1	20080515	US 2007-666944	20070430
PRIORITY APPLN. INFO.:			GB 2004-25015	A 20041111
			WO 2005-GB4054	W 20051021
OTHER SOURCE(S):	MARPAT 144:490400			
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A compound of formula: (I) in the free acid or salt form: wherein: M is 2H, Si, a metal, an oxymetal group, a hydroxymetal group or a halometal group; Pc represents a phthalocyanine nucleus of formula: (II) each R1 and R2 independently is H, optionally substituted alkyl or optionally substituted aryl; each R3 independently is optionally substituted alkyl or optionally substituted aryl; each n independently is, 1 or 2; x is 0 to 2; y is 0.1 to 2.5; x is 0.1 to 2.5; and the sum (x + y + z) is 2.2 to 4. Also compns., ink jet printer inks, cartridges and processes and printed materials.

CC 42-12 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 41, 78

IT 887115-38-0P 887115-39-1P 887115-40-4P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (production of phthalocyanine compds. for ink-jet printing inks)

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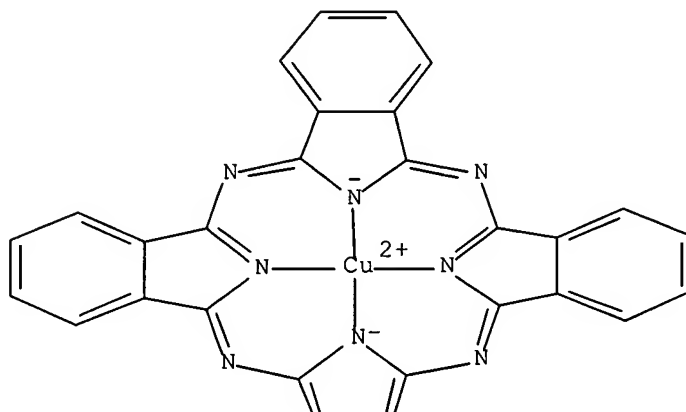
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RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(production of phthalocyanine compds. for ink-jet printing inks)

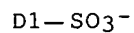
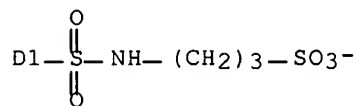
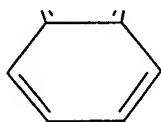
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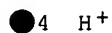
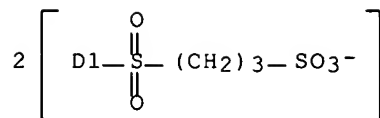
CN Cuprate(4-), [C-[[ (3-sulfopropyl)amino)sulfonyl]-C,C-bis[(3-sulfopropyl)sulfonyl]-29H,31H-phthalocyanine-2-sulfonato(6-)- $\kappa$ N29, $\kappa$ N30, $\kappa$ N31, $\kappa$ N32]-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

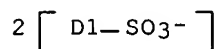
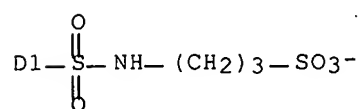
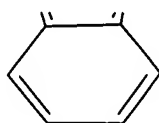
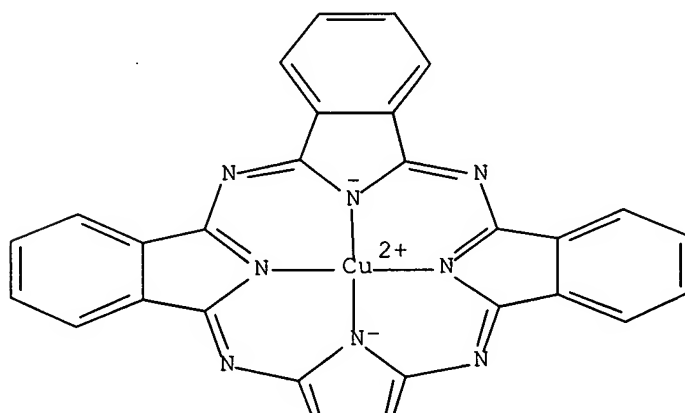


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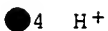
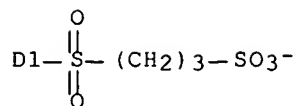


RN 887115-39-1 ZCAPLUS  
 CN Cuprate(4-), [C-[[ (3-sulfopropyl)amino)sulfonyl]-C-[(3-sulfopropyl)sulfonyl]-29H,31H-phthalocyanine-C,2-disulfonato(6-)-κN29,κN30,κN31,κN32]-, tetrahydrogen (9CI) (CA INDEX NAME)



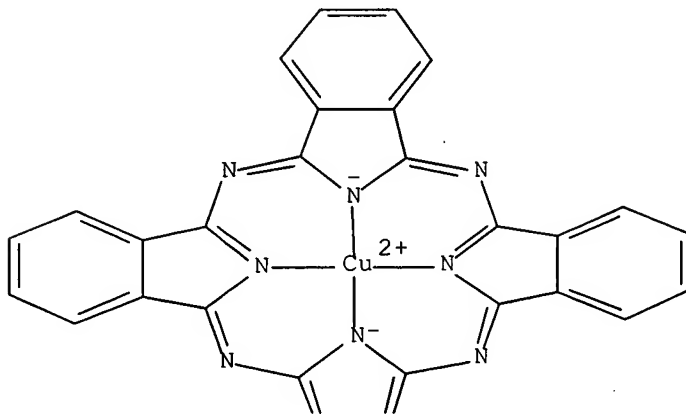


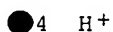
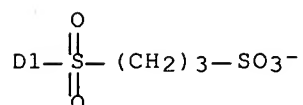
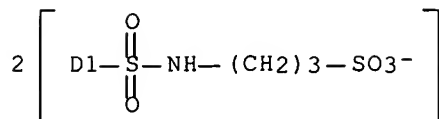
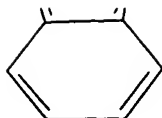
PAGE 3-A



RN 887115-40-4 ZCAPLUS  
 CN Cuprate(4-), [C,C-bis[[ (3-sulfopropyl)amino]sulfonyl]-C-bis[(3-sulfopropyl)sulfonyl]-29H,31H-phthalocyanine-2-sulfonato(6-)-κN29,κN30,κN31,κN32]-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

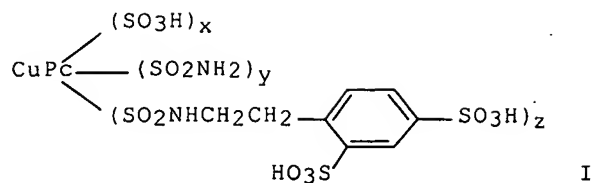




REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

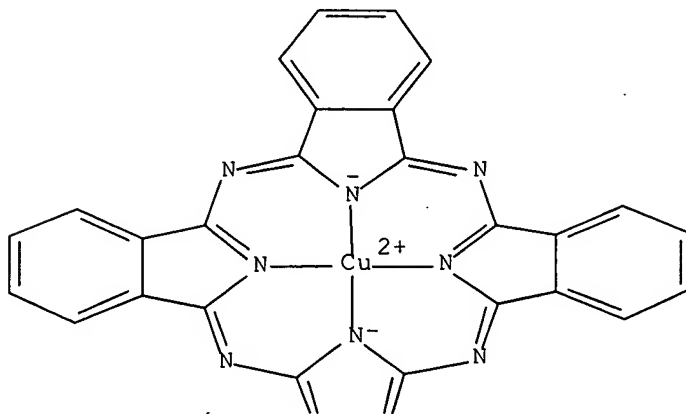
L107 ANSWER 3 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 3  
 ACCESSION NUMBER: 2006:722983 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 145:169152  
 TITLE: Phthalocyanines and their use in ink-jet inks  
 INVENTOR(S): Patel, Prakash  
 PATENT ASSIGNEE(S): Fujifilm Imaging Colorants Limited, UK  
 SOURCE: Brit. UK Pat. Appl., 21 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

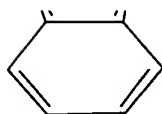
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2422376	A	20060726	GB 2005-26170	20051222
GB 2422376	B	20070131		
US 20060162615	A1	20060727	US 2006-326456	20060106
PRIORITY APPLN. INFO.:			GB 2005-1275	A 20050121
OTHER SOURCE(S):	MARPAT 145:169152			
GI				



- AB A composition comprises (a) a major dye component which is a mixture of phthalocyanine dyes of Formula I and salts thereof, wherein Pc represents a phthalocyanine nucleus; x is 0.1 to 3.8; y is 0.1 to 3.8; z is 0.1 to 3.8; the sum of  $x + y + z$  is 3 to 4; and the substituents, represented by x, y and z, are attached only to a  $\beta$ -position on the phthalocyanine ring; and (b) a liquid medium. Also ink-jet inks and cartridges comprising these compns., printing processes, printed material and dye mixts. consisting only of component (a) are disclosed.
- CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 41
- IT 147-14-8DP, sulfonic and sulfonamides derivative  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phthalocyanines and their use in ink-jet inks)
- IT 147-14-8DP, sulfonic and sulfonamides derivative  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phthalocyanines and their use in ink-jet inks)
- RN 147-14-8 ZCAPLUS
- CN Copper, [29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,.ka ppa.N32]-, (SP-4-1)- (CA INDEX NAME)

PAGE 1-A





REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L107 ANSWER 4 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 4  
 ACCESSION NUMBER: 2005:696980 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 143:155088  
 TITLE: Process for the fractionation of mixtures of phthalocyanine dyes and their use in ink jet inks  
 INVENTOR(S): Watson, Graham Michael; Johnson, Jill Louise; Patel, Prakash; Fern, William Albert  
 PATENT ASSIGNEE(S): Avecia Inkjet Limited, UK  
 SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005071025	A1	20050804	WO 2004-GB4950	20041124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1711565	A1	20061018	EP 2004-798656	20041124
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
JP 2007522279	T	20070809	JP 2006-550268	20041124
PRIORITY APPLN. INFO.:			GB 2004-1540	A 20040123
			WO 2004-GB4950	W 20041124

OTHER SOURCE(S): MARPAT 143:155088

AB A process for forming an image on a substrate comprises applying an ink thereto by means of an ink-jet printer wherein the ink comprises a liquid medium and a phthalocyanine dye fraction obtainable by the fractionation of a solution and/or suspension of a mixture of phthalocyanine dyes  $\text{MPC}(\text{SO}_3\text{H})_x(\text{SO}_2\text{NR}_1\text{R}_2)(\text{SO}_2\text{NR}_3\text{R}_4)$ , by cross-flow filtration, wherein: M is 2H, copper or nickel; Pc represents a phthalocyanine nucleus; R1 and R3 independently are H or optionally substituted C1-4 alkyl; R2 and R4 independently are H or optionally substituted hydrocarbyl; or R1 and R2, and, R3 and R4, independently, together with the nitrogen atom to which they are attached represent an optionally substituted aliphatic or aromatic ring

system; x is 0 to 3.9; y is 0 to 3.9; z is 0.1 to 4; and the sum of (x+y+z) is 2.4 to 4.5.

IC ICM C09D011-00  
ICS C09B067-00; C09B047-26

CC 42-12 (Coatings, Inks, and Related Products)

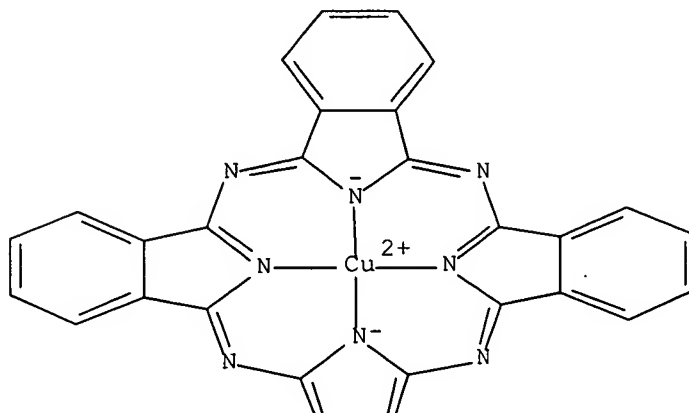
IT 147-14-8D, Copper phthalocyanine, sulfo sulfamide hydroxyethylsulfamide derivs. 12222-04-7D, C.I. Direct Blue 199, sulfo sulfamide derivs.  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(process for the fractionation of mixts. of phthalocyanine dyes and their use in ink jet inks)

IT 147-14-8D, Copper phthalocyanine, sulfo sulfamide hydroxyethylsulfamide derivs.  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(process for the fractionation of mixts. of phthalocyanine dyes and their use in ink jet inks)

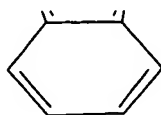
RN 147-14-8 ZCAPLUS

CN Copper, [29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,.ka ppa.N32]-, (SP-4-1)- (CA INDEX NAME)

PAGE 1-A



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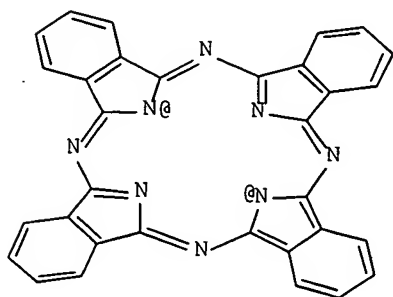


10/564959

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L107 ANSWER 5 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 5  
 ACCESSION NUMBER: 2005:141172 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 142:221383  
 TITLE: Copper phthalocyanine dye-containing ink-jet ink and its applications in ink-jet printers  
 INVENTOR(S): Patel, Prakash  
 PATENT ASSIGNEE(S): Avecia Limited, UK  
 SOURCE: PCT Int. Appl., 20 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014732	A1	20050217	WO 2004-GB2864	20040702
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1654332	A1	20060510	EP 2004-743210	20040702
EP 1654332	B1	20071121		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
JP 2006528257	T	20061214	JP 2006-520877	20040702
US 20060201385	A1	20060914	US 2006-564960	20060118
US 7326287	B2	20080205		
PRIORITY APPLN. INFO.:			GB 2003-16856	A 20030718
			WO 2004-GB2864	W 20040702
OTHER SOURCE(S):			MARPAT 142:221383	
GI				



I

AB Title ink is composed of (a) a major dye component containing copper phthalocyanine dyes:  $\text{CuPc}\beta-(\text{SO}_3\text{M})_x\beta-(\text{SO}_2\text{NH}_2)_y$ , wherein  $\text{Pc} = (\text{I})$ ,  $\text{M} = \text{cation}$  selected from  $\text{Na}^+$ ,  $\text{Li}^+$ ,  $\text{NH}_4^+$ , and volatile amines,  $x, y = 0.5 - 3.5$ ,  $x + y = 4$ , and (b) a liquid medium comprising water or organic solvents. The copper phthalocyanine dyes with the sulfo and sulfonamide substituents attaching to the  $\beta$ -position of the phthalocyanine ring are prepared by cyclization of 4-sulfophthalic acid to phthalocyanine  $\beta$ -tetrasulfonic acid in the presence of a nitrogen source, copper salts, and a base, followed by chlorination and amination. Ink-jet printing processes, ink-jet printed images, ink-jet cartridges, and ink-jet printers using the above inks are also provided. Thus, potassium 4-sulfo-phthalic acid, urea,  $\text{CuCl}_2$ , ammonium molybdate, and 1,8-diazabicyclo[5.4.0]undec-7-ene were reacted to receive a sulfonated phthalocyanine, which was further chlorinated with phosphorous oxychloride and chlorosulfonic acid and aminized with ammonium chloride to obtain a dye with  $x = 2.3$  and  $y = 1.6$ .

IC ICM C09D011-00

CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 41

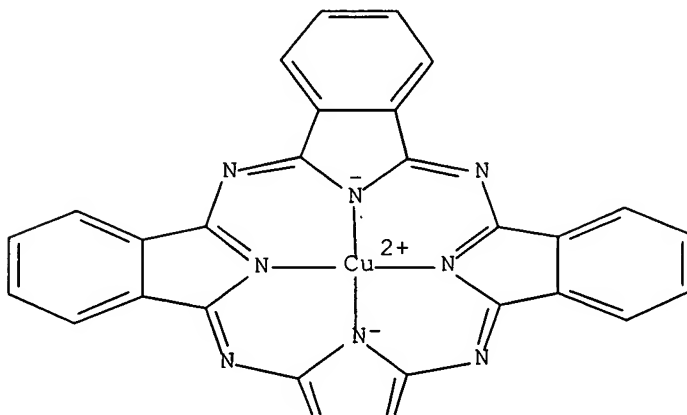
IT 147-14-8DP, sulfo/sulfonamide derivs.  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of copper phthalocyanine dye-containing ink-jet inks)

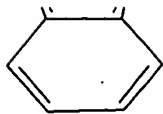
IT 147-14-8DP, sulfo/sulfonamide derivs.  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of copper phthalocyanine dye-containing ink-jet inks)

RN 147-14-8 ZCAPLUS

CN Copper, [29H,31H-phthalocyaninato(2-)]-KN29,KN30,KN31,.ka-ppa.N32]-, (SP-4-1)- (CA INDEX NAME)

PAGE 1-A



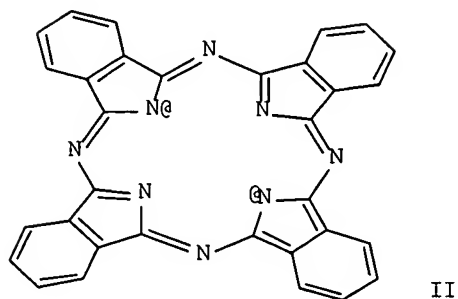
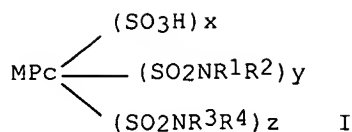


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L107 ANSWER 6 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 6  
 ACCESSION NUMBER: 2005:141168 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 142:221176  
 TITLE: Phthalocyanine dyes and its applications for ink-jet inks and ink-jet printer cartridges  
 INVENTOR(S): Patel, Prakash  
 PATENT ASSIGNEE(S): Avecia Limited, UK  
 SOURCE: PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014726	A1	20050217	WO 2004-GB2884	20040702
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
GB 2418670	A	20060405	GB 2006-552	20040702
GB 2418670	B	20070627		
US 20060180051	A1	20060817	US 2006-564958	20060118
US 7189283	B2	20070313		
PRIORITY APPLN. INFO.:			GB 2003-16855	A 20030718
			GB 2003-17411	A 20030725
			WO 2004-GB2884	W 20040702
OTHER SOURCE(S):		MARPAT 142:221176		
GI				





AB Provided is a mixture of phthalocyanine dyes (I), wherein : M = Cu or Ni, Pc = (II), R<sup>1</sup>-3 = H, C1-4 alkyl, R<sup>4</sup> = C1-4 hydroxyalkyl, x, y, z = 0.1-3.8, x + y + z = 4, and the substituents, represented by x, y and z, are attached only to the β-position of the phthalocyanine ring. A composition containing the above dyes and a liquid medium comprising water and organic solvent can be used as inks for ink-jet printing, and the printing process, printed images, and ink-jet printer cartridges are also provided. Thus, sulfonated phthalocyanine prepared from potassium 4-sulfophthalate, urea, CuCl<sub>2</sub>, ammonium molybdate, 1,8-diazabicyclo[5.4.0]undec-7-ene, and NaCl was chlorinated and amidized with phosphorous oxychloride, chlorosulfonic acid, ethanol and ammonia to obtain a phthalocyanine dye that can be used to prepare ink-jet printing inks.

IC ICM C09B047-26

ICS C09B047-06; C09D011-00

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 42, 74

IT 147-14-8P, Copper phthalocyanine

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(sulfonated derivs.; preparation of phthalocyanine dyes for ink-jet inks

and

ink-jet printer cartridges)

IT 147-14-8P, Copper phthalocyanine

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

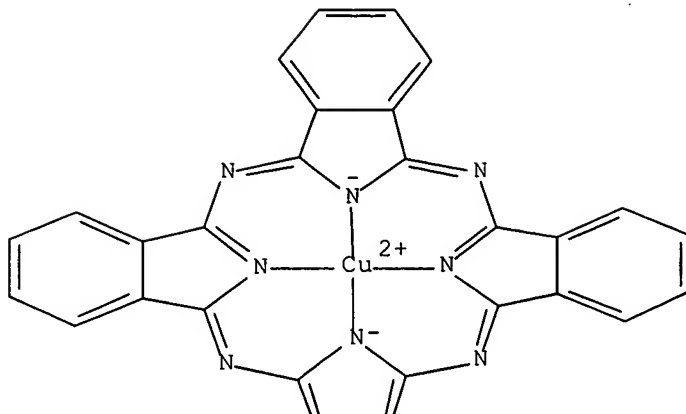
(sulfonated derivs.; preparation of phthalocyanine dyes for ink-jet inks

and

ink-jet printer cartridges)

RN 147-14-8 ZCAPLUS

CN Copper, [29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,.ka ppa.N32]-, (SP-4-1)- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

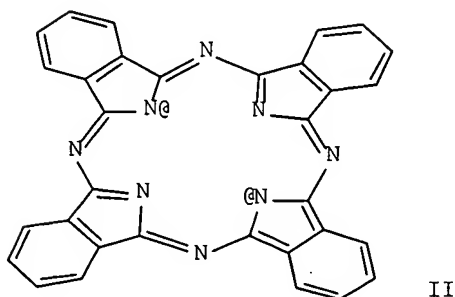
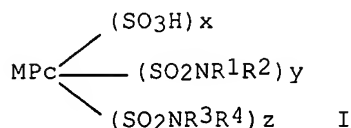
L107 ANSWER 7 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 7  
 ACCESSION NUMBER: 2005:141167 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 142:221175  
 TITLE: Phthalocyanine dye composition as ink-jet inks and ink-jet printer cartridges and printing process  
 INVENTOR(S): Patel, Prakash  
 PATENT ASSIGNEE(S): Avecia Limited, UK  
 SOURCE: PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014725	A1	20050217	WO 2004-GB2855	20040702
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,				

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

AU 2004263708	A1	20050217	AU 2004-263708	20040702
CA 2532680	A1	20050217	CA 2004-2532680	20040702
GB 2417249	A	20060222	GB 2005-21448	20040702
GB 2417249	B	20071121		
EP 1654329	A1	20060510	EP 2004-743201	20040702
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BR 2004012764	A	20060926	BR 2004-12764	20040702
CN 1852951	A	20061025	CN 2004-80026609	20040702
JP 2006528256	T	20061214	JP 2006-520876	20040702
MX 2006PA00672	A	20060330	MX 2006-PA672	20060117
US 20060201387	A1	20060914	US 2006-564935	20060118
US 7182806	B2	20070227		
IN 2006DN00365	A	20070817	IN 2006-DN365	20060120
PRIORITY APPLN. INFO.:				
			GB 2003-16854	A 20030718
			GB 2003-17413	A 20030725
			WO 2004-GB2855	W 20040702

OTHER SOURCE(S): CASREACT 142:221175; MARPAT 142:221175  
 GI



AB Provided is a mixture of phthalocyanine dyes (I), wherein : M = Cu or Ni, Pc = (II), R1-2 = H, C1-4 alkyl, R3 = H or hydrocarbyl, R4 = hydrocarbyl, x, y, z = 0.1-3.8, x + y + z = 4, and the substituents, represented by x, y and z, are attached only to the  $\beta$ -position of the phthalocyanine ring. A composition containing the above dyes and a liquid medium comprising water and organic solvent can be used as inks for ink-jet printing, and the printing process, printed images, and ink-jet printer cartridges are also provided. Thus, sulfonated phthalocyanine prepared from potassium 4-sulfophthalate, urea, CuCl<sub>2</sub>, ammonium molybdate, 1,8- diazabicyclo[5.4.0]undec-7-ene, and NaCl was chlorinated and amidized with phosphorous oxychloride, chlorosulfonic acid,

10/564959

metanilic acid, and ammonia to obtain a phthalocyanine dye that can be used to prepare ink-jet printing inks.

IC ICM C09B047-06  
ICS C09B047-26; C09B067-22; C09D011-00

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 42, 74

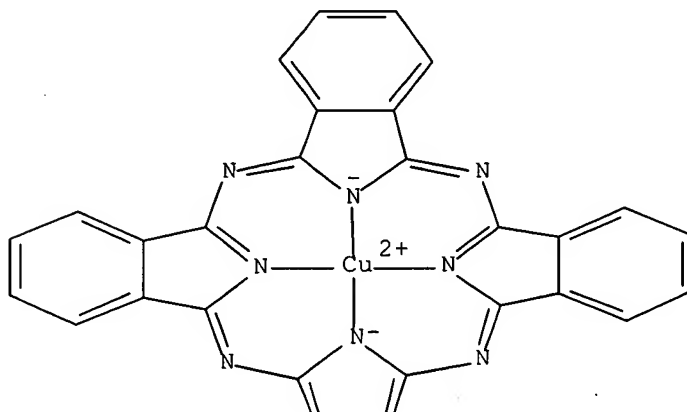
IT 147-14-8DP, Copper phthalocyanine, sulfonated derivs.  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of phthalocyanine dyes for ink-jet inks and ink-jet printer cartridges)

IT 147-14-8DP, Copper phthalocyanine, sulfonated derivs.  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of phthalocyanine dyes for ink-jet inks and ink-jet printer cartridges)

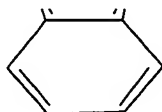
RN 147-14-8 ZCAPLUS

CN Copper, [29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,.ka ppa.N32]-, (SP-4-1)- (CA INDEX NAME)

PAGE 1-A



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REFERENCE COUNT:

10

THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/564959

107 ANSWER 8 OF 27 ZCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 8  
 L107  
 ACCESSION NUMBER: 2005:141166 ZCAPLUS Full-text  
 DOCUMENT NUMBER: 142:221174  
 TITLE: Phthalocyanine dyes and its applications for ink-jet  
 inks and ink-jet printer cartridges  
 INVENTOR(S): Patel, Prakash  
 PATENT ASSIGNEE(S): Avecia Limited, UK  
 SOURCE: PCT Int. Appl., 27 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014724	A1	20050217	WO 2004-GB2854	20040702
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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JP 2006528710	T	20061221	JP 2006-520875	20040702
MX 2006PA00671	A	20060330	MX 2006-PA671	20060117
US 20060201384	A1	20060914	US 2006-564959	20060118
IN 2006DN00362	A	20070817	IN 2006-DN362	20060120
PRIORITY APPLN. INFO.:			GB 2003-16852	A 20030718
			GB 2003-17414	A 20030725
			WO 2004-GB2854	W 20040702
OTHER SOURCE(S):	MARPAT	142:221174		
GI				